

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/728,291	Applicant(s) BADYLAK ET AL.	
	Examiner ALLISON M. FORD	Art Unit 1651	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 12 February 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____.
 Claim(s) objected to: _____.
 Claim(s) rejected: 9-16.
 Claim(s) withdrawn from consideration: 17-24.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
 13. ☒ Other: Note the attached Notice of References Cited (PTO-892).

/Allison M. Ford/
 Primary Examiner, Art Unit 1651

Continuation of 11. does NOT place the application in condition for allowance because: the arguments are not found persuasive.

The rejection of record is based on Badylak disclosing culturing tissue-specific eukaryotic cells on liver basement membrane to create a graft composition, and then administering that graft composition to damaged or diseased tissues for their repair. Badylak suggests hepatocytes as one of the species of eukaryotic cells which may be seeded onto the liver basement membrane, thus it follows that the graft composition, comprising hepatocytes and the liver basement membrane, may be administered to damaged or diseased liver tissue for the repair thereof.

Applicants have again traversed the rejection of record on the grounds that a prima facie case of obviousness has not been established over the teachings of Badylak because there was no reasonable expectation that hepatocytes, if selected as the eukaryotic cell type for seeding on the liver basement membrane, would retain their 'functionality' upon culture on the liver basement membrane, which is required by the instant claims.

Applicants have further argued that the teachings of Saad et al fail to support the Examiners' position that the art recognized basement membrane proteins from the liver support maintenance of liver-specific function of hepatocytes because Saad et al report using crude liver membrane fractions, which are not equivalent to the liver basement membrane of the instant claims. Applicants' argument that one having ordinary skill in the art would not have had a reasonable expectation that the suggested method of Badylak would result in the hepatocytes retaining their 'functionality' is not persuasive.

In response, the argument is not found persuasive. It is maintained that it was well known in the art at the time the invention was made that hepatocytes must be cultured on a substrate of extracellular matrix in order to retain functionality (See, e.g. Bissell et al, J Clin Invest, 1987, pp. 801, "Introduction"). The proteins of the crude membrane fraction of Saad et al, while not identical to the basement membrane of the instant invention, at least illustrates that hepatocytes could be routinely cultured under conditions which supported maintenance of their 'functionality'. Bissell et al, who report culturing hepatocytes on EHS tumor extract, can also be cited as evidence that means for culturing hepatocytes in a manner which supports their 'functionality' were well known. As such, it is maintained that the art recognized that hepatocytes, when cultured on complex substrates comprising extracellular matrix which contains the complex of proteins found in the basal lamina of the liver, are capable of retaining their functionality. Because liver basement membrane is precisely the basal lamina of the liver, one would have had a reasonable expectation that hepatocytes cultured on liver basement membrane, (i.e., as suggested by Badylak) would retain their functionality, and thus would be useful in the suggested method of repairing damaged or diseased liver tissue. Thus one would have had a reasonable expectation that hepatocytes, when selected as the type of tissue-specific cell used in the method of Badylak, would retain their liver-specific functionality and thus would be useful in repairing damaged or diseased liver. The rejection of record stands